

**REMARKS**

Reconsideration of the application, as amended, is respectfully requested.

Concerning the objections to the specification based on informalities, the specification has been amended as suggested by the Office to make the minor changes to page 4 and to the abstract suggested by the Examiner. Applicants have also made the minor change from " $\mu$ M" to  $-\mu$ m— on page 9 to make it consistent with the examples. Claim 1 has been amended in accordance with the suggestion of the Examiner to indicate that the antifreeze protein is isolated, rather than being the natural plant product without being processed by humans. Of course, use of the isolated antifreeze protein in combination with other ingredients would fall within the claims. Claim 1 has also been amended to incorporate the subject matter of claim 3.

Regarding the objection that claim 1 is indefinite in the recitation 'which can be derived from', applicants submit that the language is not ambiguous; the language denotes that the subject antifreeze proteins are obtainable from plants. The Office points to no reason why applicants should be limited, for example, to proteins derived only from plants.

As for the suggestion that the term 'overlap with' in claim 3 is unclear (page 4), applicants submit that the average skilled person would readily understand that what is meant here is sequence identity. As to modification, applicants have amended the claim to make it clearer that the modifications do not materially affect the ice recrystallisation inhibition properties, (see p6, lines 23-27 of the specification).

Regarding the rejection of claim 1 and 2 under 35 USC 102(e) or 102(e)/103, applicants have amended claim 1 to incorporate the limitations of claim 3, which is not so rejected. Therefore, it appears that the amended claim should be allowable.

Attached hereto is a marked-up version of the changes made to the specification and claims by the current amendment. The attached page is captioned "Version With Markings To Show Changes Made."

In view of the foregoing, it is respectfully requested that the application, as amended, be allowed.

Respectfully submitted,



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**VERSION WITH MARKINGS TO SHOW CHANGES MADE****In the specification:**

The Paragraph beginning at line 8 of page 4 has been amended as follows:

...AFP which is very active w.r.t. with respect to ice-recrystallisation inhibition properties.

The Paragraph beginning at line 14 of page 9 has been amended as follows:

...described in the examples- of 15 µm ~~µM~~ or less, more preferred from 5 to 15 µm.

Please amend the abstract as follows:

Anti-freeze protein comprising at least 40% of the amino acids, S, T or Nserine, threonine or asparagine and having at least 80% ~~overlap with~~ sequence identity to the following amino acid sequence (Seq. ID No.1):

D-E-Q-P-N-T-I-S-G-S-N-N-T-V-R-S-G-S-K-N-V-L-A-G-N-D-N-T-V-I-S-G-D-N-N-S-V-S-  
G-S-N-N-T-V-V-S-G-N-D-N-T-V-T-G-S-N-H-V-V-S-G-T-N-H-I-V-T-D-N-N-N-N-V-S-G-N-  
D-N-N-V-S-G-S-F-H-T-V-S-G-G-H-N-T-V-S-G-S-N-N-T-V-S-G-S-N-H-V-V-S-G-S-N-K-V-  
V-T-D-A

as well as modified versions thereof.

In the claims:

Please cancel, without prejudice, claim 3 and amend claim 1 as follows:

1. (Amended) Isolated ~~Anti-freeze~~anti-freeze protein which can be derived from plants characterised in that at least 40% ~~its~~the amino acids of said isolated anti-freeze protein are from the group of Serine, Threonine and Asparagine and in that said protein has at least 80% overlap with the following amino acid sequence

D-E-Q-P-N-T-I-S-G-S-N-N-T-V-R-S-G-S-K-N-V-L-A-G-N-D-N-T-V-I-S-G-D-N-N-  
S-V-S-G-S-N-N-T-V-V-S-G-N-D-N-T-V-T-G-S-N-H-V-V-S-G-T-N-H-I-V-T-D-N-N-  
N-N-V-S-G-N-D-N-N-V-S-G-S-F-H-T-V-S-G-G-H-N-T-V-S-G-S-N-N-T-V-S-G-S-N-  
H-V-V-S-G-S-N-K-V-V-T-D-A

as well as modified versions thereof wherein the modification does not materially affect the ice recrystallisation inhibition properties.